

## **REMARKS**

Reconsideration and allowance of the subject application are respectfully requested.

Claims 26 – 43 and 57 – 92 are pending. Claim 26 has been amended. Claims 44 – 56 have been canceled, without prejudice or disclaimer of the subject matter contained therein. New claims 76 – 92 have been added.

With respect to new claims 76 – 92, these claims are of a similar scope as that of claims 26 – 43 and are merely a different way of characterizing the subject matter defined by claims 27 – 43.

### **Objection to Claim 53**

Claim 53 has been objected under 37 CFR 1.75 as being a substantial duplicate of claim 51. In response, the Applicant submits that claim 53 has been canceled, and therefore, respectfully request withdrawal of the claim objection.

### **Rejections of Claims 27 – 43 and 60 under 35 USC Section 112**

The Examiner has rejected claims 27 – 43 and 60 under 35 U.S.C. 112 as failing to comply with the written description requirement, in that claims 27 – 43 and 60 recite term “onsize particle fraction”. In response, the Applicants submits that claims 27, 43 and 60 have been amended such that the term “onsize particle fraction” has been replaced with the term “desired particle size fraction”. As a result, the Applicant submits that these claims are now supported by the specification and comply with the written description requirement.

### **Rejection of Claims 44 – 75 under 35 USC Section 103**

The Examiner has rejected claims 44, 45, 47, 54 - 56, 72, 74, and 75 under 35 U.S.C. 103(a) as being unpatentable over Heath (US 3,051,586) in view of Dorfman (US 5,122,182) and Reidmeyer (US 6,432,886 91).

(A) Claims 44 – 56

The Examiner has rejected independent claim 44 as being unpatentable on two separate bases. Each of these bases is explained at, respectively, paragraphs 7 and 10 of the final office action.

In support of the rejection of claim 44 at paragraph 7, the Examiner cites U.S. Patent No. 3,051,586 issued to Heath (hereinafter, US '586), U.S. Patent No. 5,122,182 issued to Dorfman (hereinafter, US '182), and U.S. Patent No. 6,432,886 issued to Reidmeyer (hereinafter, US '886).

None of these references discloses a method by which a composition is made, and which includes the step of rendering a binder to become non-dispersible in the original liquid. Moreover, there is nothing inherent within the methods used to make the compositions described in these references which would render the respective binders to become non-dispersible. In support of this position, the Applicant hereby submits and refers to the Declaration of William Walkhouse, attached hereto as Appendix "A".

In support of the rejection of claim 44 at paragraph 10, the Examiner cites U.S. Patent No. 4,039,337 issued to Brown (hereinafter, US '337) and U.S. Patent No. 5,506,055 issued to Dorfman (hereinafter, US '055).

None of these references discloses a method by which a composition is made, and which includes the step of rendering a binder to become non-dispersible in the original liquid. Moreover, there is nothing inherent within the methods used to make the compositions described in these references which would render the respective binders to become non-dispersible. In support of this position, the Applicant hereby submits and refers to the Declaration of William Walkhouse, attached hereto as Appendix "A".

Having regard to the foregoing. The Applicant submits that claim 44 is patentable over the cited references.

With respect to claims 45 to 56, each of these claims is directly or indirectly dependent on claim 44. Accordingly, and relying on the foregoing remarks, the Applicant also submits that claims 45 to 56 are patentable over the cited references.

(B) Claims 57 – 75

The Examiner has rejected independent claim 57 as being unpatentable on two separate bases. Each of these bases is explained at, respectively, paragraphs 9 and 10 of the final office action.

(A) In support of the rejection of claim 57 at paragraph 9, the Examiner cites US '586, US '182, US' 886, US '055, and U.S. Patent No. 5,468,401 issued to Lum (hereinafter, US '401). The Examiner cites US '401 for purpose of illustrating the use of bentonite as a binder.

In response, the Applicant submits that the binder in US '401 (Lum) does not use bentonite in the concentration recited claim 57. The Applicant submits that the binder disclosed in US '401 comprises a plurality of components, and that although one of those components may be bentonite, use of bentonite within the binder system of the US '401 composition is merely as a compressibility enhancer, and that the compressibility enhancer is only a small part of such binder system. In support of this position, the Applicant hereby submits and refers to the Declaration of William Walkhouse, attached hereto as Appendix "A".

In support of the rejection of claim 57 at paragraph 10, the Examiner cites U.S. Patent No. 4,039,337 issued to Brown (hereinafter US '337) and US '055. The Examiner appears to cited US '337 for the purpose of illustrating the disclosure of a composition including a silicate binder.

In response, the Applicant submits that, a person of ordinary skill in the art, being aware of US '337 (Brown), would not consider using hydrogen aluminium silicate as a binder during the making of a solid lubricant agglomerate. This is because of the pronounced differences between hydrous aluminium silicate and the

silicates of US '337, and how these differences affect the manner by which each of them coat components of its respective solid lubricant agglomerate. The mechanism by which hydrous aluminum silicate coats components of the solid lubricant agglomerate (being made by the method as claimed in claim 57), in comparison to the mechanism by which the silicates of US '337 coats components of the solid lubricant agglomerate, is very different. Unlike the water-soluble silicates described in US '337, hydrous aluminium silicate does not actually dissolve into solution as ions. Rather, hydrous aluminium silicate disperses into platelets which are about 300 to 500 microns in diameter, and only 3 to 5 microns thick. The hydrous aluminium platelets develop concentrated areas of cations and anions. Because of this, the individual platelets have a tendency to stick together (like overlapping playing cards) and form a very strong film on the available surface of the agglomerating components as the water is driven off. In contrast, the silicates described in US '337 dissolve in water and coat the particles in US '337 by a wetting action.

Additionally, unlike the silicates described in US '337, the crystallographic structure of the hydrous aluminium silicate binder (of the solid lubricant agglomerate made in accordance with the method as claimed in claim 57) can be modified with a post-heat treatment such that the hydrous aluminium silicate binder becomes "stabilized" and cannot be re-dispersed as platelets. In contrast, the silicate binders discussed in US '337 would remain re-dissolvable. Being able to stabilize a binder, such as hydrous aluminium silicate binder (i.e. render the hydrous aluminium silicate non-dispersible), is important for subsequent hydrometallurgical coating operations.

In support of this position regarding US '337, the Applicant hereby submits and refers to the Declaration of William Walkhouse, attached hereto as Appendix "A".

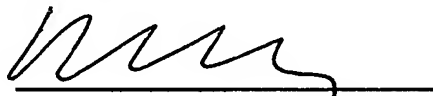
Having regard to the foregoing, the Applicant submits that claim 57 is patentable over the cited references.

With respect to claims 58 to 75, each of those claims is directly or indirectly dependent on claim 57. Accordingly, and relying on the foregoing remarks, the Applicant also submits that claims 58 to 75 are patentable over the cited references.

The Applicant respectfully requests favourable consideration, and an early Notice of Allowability. The Examiner is invited to contact Applicant's undersigned attorney at his office in Toronto at (416) 862-5795 to resolve any remaining issues.

Respectfully submitted,

Hajmrle, et al.

A handwritten signature in black ink, appearing to read 'Mark Sajewycz', is written over a horizontal line.

Mark Sajewycz

Registration No. 52,525

Gowling Lafleur Henderson LLP

Suite 1600, 1 First Canadian

Place, 100 King Street West

Toronto, Ontario

Canada M5X 1G5

(416) 862-7525

TOR\_LAW\6661599\1